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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

10/22/2003 LWONDIM1 00000035 020385 10687335

02 FC:2001 385.00 OP
03 FC:2203 145.00 DA

Adjustment date: 03/05/2004 SDIRETA1
10/22/2003 LWONDIM1 00000035 020385 10687335
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PTO-1556
(5/87)

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group
Art Unit: 2821

Attorney
Docket No.: WAT0133

Applicant: Daniel Wang et al.

Invention: BROAD BAND ANTENNA

Serial No: 10/687,335

Filed: October 16, 2003

Examiner: Unknown

Certificate Under 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

on February 25, 2004

John F. Hoffman

REFUND REQUEST UNDER 37 CFR § 1.26

Mail Stop 16
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On October 22, 2003, our Deposit Account was charged \$145.00 for filing multiple dependent claims.

It is submitted that the instant application was filed with a total of 9 claims, including one independent claim as evidenced by the attached copy of claims which were originally filed on October 16, 2003.

Therefore, a refund in the amount of \$145.00 is requested in the above identified application pursuant to 37 CFR §§ 1.26. Please credit the refund to Deposit Account No. 02-0385, BAKER & DANIELS.

Respectfully submitted,

John F. Hoffman, Registration No. 26,280
Attorney for Applicant

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A series collinear antenna segment, including a plurality of radiating elements and inter-element phasing sections arranged alternately on a single sided elongated substrate, wherein said segment is adapted to be operatively curved in an at use configuration about a longitudinal axis running substantially along the length of said segment; and wherein said inter-element phasing sections are operatively adapted to allow said radiating elements to radiate electromagnetic radiation substantially in phase over an intended range of frequencies.
2. A series collinear antenna segment as claimed in claim 1, wherein said substrate is flexible.
3. A series collinear antenna segment as claimed in claim 1, wherein said substrate includes an adhesive for affixing said substrate to a surface.
4. A series collinear antenna segment as claimed in claim 1, wherein said substrate is a radome and said segment is arranged on an inner surface of said radome.
5. A series collinear antenna segment as claimed in claim 1 wherein said inter-element phasing section is arranged offset laterally and to one side of a longitudinal axis running substantially along the centre of said substrate such that said radiating elements and said inter-element phasing sections are operatively facing substantially perpendicular to each other.
6. A series collinear antenna segment as claimed in claim 2 wherein said inter-element phasing section is arranged offset laterally and to one side of a longitudinal axis running substantially along the centre of said substrate such that the angle between a tangent to the curved radiating element at the element centre and said inter-element phasing section can be adjusted by varying the degree of curvature of the flexible substrate in order to adjust the degree of coupling between the inter-element phasing section and the radiating element from a minimum of 90 degrees to a larger value at less than 90 degrees.

7. A series collinear antenna segment as claimed in claim 1 wherein said inter-element phasing section includes a conductive track, said conductive track arranged to follow a serpentine path.
8. An end fed series collinear antenna incorporating at least one series collinear antenna segment as claimed in claim 1.
9. A centre-fed collinear antenna incorporating at least one series collinear antenna segment as claimed in claim 1.